The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte BRIAN E. GORRELL

Appeal No. 2005-0267
Application No. 09/982,154

ON BRIEF

Before KIMLIN, PAK and WALTZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-20, all the claims in the present application. Claim 1 is illustrative:

1. A high voltage cable including a fiber core, a first layer of an electrically relatively non-insulative polymer, a second layer of an electrically relatively non-conductive polymer, a third layer of an electrically relatively non-insulative polymer, a fourth layer including a metal braid shield, and a fifth layer including a relatively solvent- and abrasive-resistant polymer jacket.

The examiner relies upon the following references as evidence of obviousness:

Hastings et al. (Hastings '827)	4,576,827	Mar. 18, 1986
Hastings et al. (Hastings '935)	4,739,935	Apr. 26, 1988
Dinzen et al. (Dinzen)	5,250,755	Oct. 5, 1993

Appellant's claimed invention is directed to a high voltage cable including a fiber core, first and third layers of an electrically relatively non-insulative polymer, a second layer of an electrically relatively non-conductive polymer between the first and third layers, a fourth layer comprising a metal braid shield and as a fifth layer an abrasive-resistant polymer jacket. The fiber core may comprise stranded polyester fibers impregnated with carbon black. The electrically relatively non-insulative polymer layer may comprise carbon black-loaded polyethylene.

Appealed claims 1, 2 and 9-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hastings '827 in view of Dinzen. Claims 3-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hastings '827 in view of Dinzen and Hastings '935.

Appellant asserts the separate patentability of all the appealed claims.

We have thoroughly reviewed each of appellant's arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

There is no dispute that Hastings '827, like appellant, discloses a high voltage cable comprising a fiber core, a first layer of an electrically relatively non-insulative polymer, a second layer of an electrically relatively non-conductive polymer, a fourth layer including a metal braid shield, and a fifth layer comprising a relatively solvent- and abrasive-resistant polymer jacket. As recognized by the examiner, the high voltage cable of Hastings '827 fails to include the presently claimed third layer of an electrically relatively non-insulative polymer. However, we concur with the examiner that Dinzen evidences the obviousness of modifying the high voltage

cable of Hastings '827 by incorporating an additional electrically relatively non-insulative polymer layer which corresponds to appellant's third layer.

Dinzen discloses a high voltage cable comprising a conductive layer between the insulative layer and the layer of braid wires, and teaches that such a construction prevents damage to the cable during transient over-voltages. Accordingly, we find that it would have been obvious for one of ordinary skill in the art to conduct a typical cost/benefit analysis to determine whether it is economically prudent to include an additional electrically relatively non-insulative polymer layer in the high voltage cable of Hastings '827. Manifestly, such an analysis would take into account the intended uses for the cable.

Regarding the separate rejection of claims 3-8, we concur with the examiner that Hastings '935 evidences the obviousness of the specifically claimed features, for example, impregnating the core with carbon black and using a carbon black-loaded polyethylene for the first electrically relatively non-insulative polymer layer. In our view, the prior art submitted by the examiner, taken as a whole, provides substantial evidence of the obviousness of the material selected by appellant to construct the claimed high voltage cable.

The thrust of appellant's argument is that the myriad of choices provided by the cited references for the various layers of the high voltage cable affords no guidance for one of ordinary skill in the art to select the specifically claimed structure. It is submitted that "Appellant counts six different choices for the core of the cable, three different choices for the first layer, four different choices for the second layer, five different choices for the third layer, five different choices for the fourth layer, and four different choices for the fifth layer" (page 10 of principal brief, second paragraph). Appellant concludes that by his calculation "these choices provide seventy-two hundred different high voltage cable configurations that can be made up from among these choices" (page 11 of principal brief, penultimate paragraph).

What is overlooked if not obscured by appellant's argument is that all that is necessary to arrive at the high voltage cable of claim 1 is to add an additional single layer to the high voltage cable of Hastings '827, and select conventional cable materials for the features of the dependent claims. It is well settled that a selection of some from among many indiscriminately from the prior art, including a selection from a list of

thousands, is a matter of obviousness for one of ordinary skill in the art as long as the prior art teaches the suitability of the selections. In re Susi, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971); In re Lemin, 332 F.2d 839, 841, 141 USPQ 814, 815 (CCPA 1964). Appellant has failed to advance any compelling argument that refutes the basic tenet of the examiner's rejection, i.e., appellant has not explained why it would have been nonobvious for one of ordinary skill in the art to include an additional electrically relatively non-insulative polymer layer in the high voltage cable of Hastings '827 for the purpose of protecting the cable against damage during transient over-voltages.

Appellant's principal brief devotes much analysis to each of the features recited in all the claims on appeal and the differences between these features and the cables disclosed in each of the three cited references. As such, appellant's principal brief is tantamount to attacking the cited references individually, rather than in combination. It is by now axiomatic that it is not necessary for a finding of obviousness under § 103 that all the elements or teachings of one reference be fully combined with those of another reference. In re Griver, 354 F.2d

377, 381, 148 USPQ 197, 200 (CCPA 1966); In re Billingsley, 279 F.2d 689, 691, 126 USPQ 370, 372 (CCPA 1960). Rather, the proper inquiry under § 103 is what the references, taken collectively, would have suggested to one of ordinary skill in the art. In re Keller, 642 F.2d 413, 426, 208 USPQ 871, 882 (CCPA 1981). In the present case, the separate arguments advanced by appellant for each claim on appeal fail to set forth a rationale why one of ordinary skill in the art would have considered it nonobvious to modify the high voltage cable of Hastings '827 in the manner proposed by the examiner.

As a final point, we note that appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the prima facie case of obviousness established by the examiner.

In conclusion, based on the forgoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

EDWARD C. KIMLIN)
Administrative Patent Judge)
)
)
)
)
CHUNG K. PAK) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
)
)
THOMAS A. WALTZ)
Administrative Patent Judge)

ECK:clm

Barnes & Thornburg
11 South Meridian
Indianapolis, IN 46204